
ACRONYMS/ABBREVIATIONS

Acronym/ Abbreviation	Definition
a, b, c	Correlation coefficients which have been fitted to the Flynn's data to give Equation 3.8
ABS	Dermal absorption from soil
ABS _d	Fraction of contaminant absorbed dermally (dimensionless)
ABS _{GI}	Fraction of contaminant absorbed in gastrointestinal tract (dimensionless)
AF	Adherence factor of soil to skin (mg/cm ² -event)
ARARs	Applicable or Relevant and Appropriate Requirements
AT	Averaging time (days)
β	Constant specific for the medium through which diffusion is occurring
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
BW	Body weight (kg)
CF	Conversion factor (10 ⁻⁶ kg/mg)
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
cPAH	Carcinogenic polynuclear aromatic hydrocarbons
C _{soil}	Chemical concentration in soil (mg/kg)
C _{tot}	Total concentration of chemical in the aqueous solution (mg/l)
C _u	Concentration of the non-ionized species (mg/l)
C _w	Chemical concentration in water (mg/cm ³)
DA _{event}	Absorbed dose per event (mg/cm ² -event)
DAD	Dermal absorbed dose (mg/kg-day)
D _e	Effective diffusivity of the absorbing chemical in the epidermis (cm ² /hr)
D _o	Diffusivity of a hypothetical molecule with a molecular volume (MV) = 0 (cm ² /hr)
D _{sc}	Effective diffusion coefficient of the chemical through the stratum corneum
DEA	Dermal Exposure Assessment: Principles and Applications (U.S. EPA, 1992a)
ED	Exposure duration (years)
EF	Exposure frequency (days/year)

ACRONYMS/ABBREVIATIONS (continued)

Acronym/ Abbreviation	Definition
EFH	Exposure Factors Handbook (U.S. EPA, 1997a)
EPA	U. S. Environmental Protection Agency
EPC	Exposure point concentration
EPD	Effective Prediction Domain
EV	Event frequency (events/day)
FA	Fraction absorbed water (dimensionless)
FTSA	Fraction of total surface area for the specified body part
GI	Gastrointestinal
GSD	Geometric standard deviation
HHEM	Human Health Evaluation Manual
IR	Ingestion rate (for water, liters/day)
K_{ew}	Equilibrium partition coefficient between the epidermis and water for the absorbing chemical (dimensionless)
K_{ow}	Octanol/water partition coefficient (dimensionless)
K_p	Dermal permeability coefficient of compound in water (cm/hr)
K_{p-msd}	Measured dermal permeability coefficient of compound in water (cm/hr)
K_{p-pred}	Predicted dermal permeability coefficient of compound in water (cm/hr)
$K_{p,ve}$	Steady-state permeability coefficient through the viable epidermis (ve) (cm/hr)
$K_{sc/w}$	Equilibrium partition coefficient between the stratum corneum and water (chemical specific dimensionless)
L_e	Effective thickness of the epidermis (cm)
l_{sc}	Apparent thickness of stratum corneum (cm)
MV	Molar volume (cm ³ /mole)
MW	Molecular weight (g/mole)
IRIS	Integrated Risk Information System
NCEA	National Center for Environmental Assessment
OERR	Office of Emergency and Remedial Response (now known as OSRTI)
OHEA	Office of Health and Environmental Assessment

ACRONYMS/ABBREVIATIONS (continued)

Acronym/ Abbreviation	Definition
ORD	Office of Research and Development
OSWER	Office of Solid Waste and Emergency Response
OSRTI	Office of Superfund Remediation and Technology Innovation
P_{particle}	Particle density (g/cm^3)
PAH	Polynuclear aromatic hydrocarbon
PCBs	Polychlorinated biphenyls
pK_a	Chemical specific ionization constant
PRG	Preliminary Remediation Goals
RAGS	Risk Assessment Guidance for Superfund (U.S. EPA, 1989)
RfD	Reference dose
RfD_{abs}	Absorbed reference dose ($\text{mg}/\text{kg}\cdot\text{day}$)
RfD_o	Reference dose oral ($\text{mg}/\text{kg}\cdot\text{day}$)
RME	Reasonable maximum exposure
SA	Skin surface area available for contact (cm^2)
SC	Stratum corneum
SCS	Soil Conservation Service
SEE	Standard error of the estimator
SF	Slope factor
SF_{abs}	Absorbed slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹
SF_o	Oral slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹
SF_d	Dermal cancer slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹
SFS_{adj}	Age-adjusted dermal exposure factor ($\text{mg}\cdot\text{yrs}/\text{kg}\cdot\text{event}$)
SVOCs	Semivolatile organic compounds
TCDD	Tetrachlorodibenzo-p-dioxin
τ_{event}	Lag time per event (hr/event)
t^*	Time to reach steady-state (hr)
t_{event}	Event duration (hr/event)
THQ	Target Hazard Quotient (non-cancer)
TRL	Target Risk Level (cancer)

ACRONYMS/ABBREVIATIONS (continued)

Acronym/ Abbreviation	Definition
t_{sc}	Turnover time for the stratum corneum (days)
95% CL	95% confidence level
95% LCL	95% lower confidence level
95% UCL	95% upper confidence level